

**CENTER FOR DRUG EVALUATION AND
RESEARCH**

APPLICATION NUMBER:
21-061 and 21-062

CHEMISTRY REVIEW(S)

**DIVISION OF SPECIAL PATHOGEN AND
IMMUNOLOGIC DRUG PRODUCTS — HFD-590**

Review of Chemistry, Manufacturing and Controls Section

NDA #: 21-061

CHEMISTRY REVIEW #: 1

REVIEW COMPLETED: November 30, 1999

SUBMISSION TYPE	DOCUMENT DATE	CDER DATE	ASSIGNED DATE
N000	12/28/98	12/28/98	12/31/98
BC (#37)	09/02/99	09/03/99	09/07/99
BC (#44)	10/08/99	10/12/99	10/19/99
BC (#45)	10/08/99	10/12/99	10/19/99
BC (#46)	10/08/99	10/12/99	10/19/99
BC (#57)	12/03/99	12/06/99	12/08/99
BC (#58)	12/08/99	--	--
BC (#60)	12/10/99	--	--
BC (#61)	12/14/99	--	--

NAME/ADDRESS OF SPONSOR:

Bristol-Myers Squibb Company
5 Research Parkway
Wallingford, CT 06492

DRUG PRODUCT NAME:

Proprietary:

TEQUIN

Nonproprietary:

Gatifloxacin

CHEM. TYPE/THER. CLASS:

1S

DRUG CLASS:

4030100

PHARMACOLOGICAL CATEGORY:

Antibiotic

INDICATION:

Bacterial Infections

DOSAGE FORM/STRENGTH:

Tablets, 200 mg and 400 mg

ROUTE OF ADMINISTRATION:

Oral

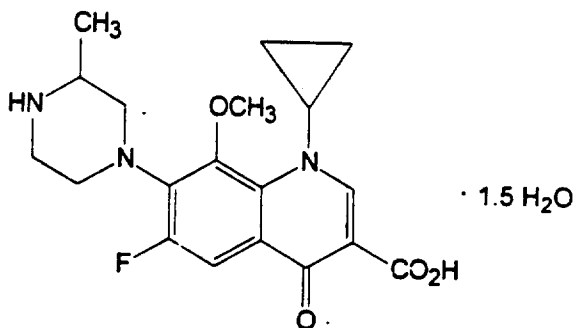
CHEMICAL NAME/STRUCTURAL FORMULA:

(=)-1-cyclopropyl-6-fluoro-1,4,-dihydro-8-methoxy-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid sesquihydrate

CAS Registry: 180200-66-2

Molecular Formula: $C_{19}H_{22}FN_3O_4 \cdot 1.5 H_2O$

Molecular Weight: 402.42



SUPPORTING DOCUMENTS:

[redacted]	Inadequate (10/20/99); Adequate on 12/14/99
[redacted]	Adequate (07/27/99)
[redacted]	N/A

RELATED DOCUMENTS:

NDA 21-062	

REMARKS/COMMENTS:

DRUG SUBSTANCE — Revisions to some of the acceptance criteria for the drug substance were requested; clarification was requested concerning the method for calculating total impurities; and method validation data for a proposed alternate analytical method was requested. Other minor deficiencies. Plus, [redacted] was initially found inadequate.

DRUG PRODUCT — An accurate quantitative composition was not provided in the original submission; a revision of acceptance criteria was requested; revisions to the stability commitment and stability protocol were requested; and clarification was requested concerning a statement made in the application about in-process controls. Other minor deficiencies, including missing packaging information. Method validation was not completed, but is not needed for approval.

LABELING — Only minor issues, resolved.

ENVIRONMENTAL ASSESSMENT — A categorical exclusion was requested. The request was found to be acceptable.

CONCLUSIONS & RECOMMENDATIONS:

Recommend APPROVAL.

	John Smith. Review Chemist	12/17/99
Concurrence:		
HFD-590 NSchmuff	/S/	12/17/99
NDA 21-061	HFD-590/CSO/DBernato	
HFD-590 Div. File	HFD-590/AEllis	
HFD-590 NSchmuff	HFD-590/SAltaie	
HFD-590 JKorvick	HFD-590/JSmith	

**DIVISION OF SPECIAL PATHOGEN AND
IMMUNOLOGIC DRUG PRODUCTS — HFD-590**

Review of Chemistry, Manufacturing and Controls Section

NDA #: 21-062

CHEMISTRY REVIEW #: 1

REVIEW COMPLETED: December 17, 1999

SUBMISSION TYPE:	DOCUMENT DATE	CDER DATE	ASSIGNED DATE
N000	12/28/98	12/28/98	12/31/98
BC (#37)	09/02/99	09/03/99	09/07/99
BC (#44)	10/08/99	10/12/99	10/19/99
BC (#46)	10/08/99	10/12/99	10/19/99
BC (#57)	12/03/99	12/06/99	12/08/99
BC (#58)	12/08/99	--	--
BC (#60)	12/10/99	--	--
BC (#61)	12/14/99	--	--

NAME/ADDRESS OF SPONSOR:

Bristol-Myers Squibb Company
5 Research Parkway
Wallingford, CT 06492

DRUG PRODUCT NAME:

Proprietary:

TEQUIN Injection

Nonproprietary:

Gatifloxacin

CHEM. TYPE/THER. CLASS:

1S

DRUG CLASS:

4030100

PHARMACOLOGICAL CATEGORY:

Antibiotic

INDICATION:

Bacterial Infections

DOSAGE FORM/STRENGTH:

200 mg & 400 mg (in 20-mL & 40-mL vials
made by BMS and in 100-mL and 200-mL
bags made by Abbott)

ROUTE OF ADMINISTRATION:

Intravenous

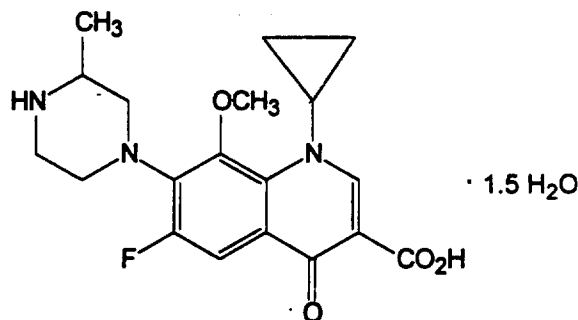
CHEMICAL NAME/STRUCTURAL FORMULA:

(±)-1-cyclopropyl-6-fluoro-1,4,-dihydro-8-methoxy-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid sesquihydrate

CAS Registry: 180200-66-2

Molecular Formula: C₁₉H₂₂FN₃O₄ •
1.5 H₂O

Molecular Weight: 402.42



SUPPORTING DOCUMENTS:

[REDACTED]	Inadequate (10/20/99); Adequate on 12/14/99
[REDACTED]	Adequate (07/27/99)
[REDACTED]	Inadequate (11/18/99); Adequate on 12/14/99

RELATED DOCUMENTS:

NDA 21-061	

REMARKS/COMMENTS:

DRUG SUBSTANCE — Revisions to some of the acceptance criteria for the drug substance were requested; clarification was requested concerning the method for calculating total impurities; and method validation data for a proposed alternate analytical method was requested. Other minor deficiencies. Plus, [REDACTED] was initially found inadequate.

DRUG PRODUCT — A revision of acceptance criteria was requested, and revisions to the stability commitment and stability protocol were requested. Other minor deficiencies, including missing packaging information. Method validation was not completed, but is not needed for approval. Plus, [REDACTED] for the drug product [REDACTED] was initially found inadequate.

LABELING — Only minor issues, resolved.

ENVIRONMENTAL ASSESSMENT — A categorical exclusion was requested. The request was found to be acceptable.

CONCLUSIONS & RECOMMENDATIONS:

Recommend APPROVAL.

	John Smith, Review Chemist
Concurrence:	
HFD-590/NSchmuff	
cc:	
NDA 21-062	HFD-590/CSO/DBernato
HFD-590/Div. File	HFD-590/Aellis
HFD-590/ NSchmuff	HFD-590/SAltaie
HFD-590/JKorvick	HFD-590/JSmith